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MONTANA WEATHER AND CROP SUMMARY

U.S. DEPARTMENT OF AGRICULTURE
Statistical Reporting Service

Cooperating with
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Montana State University

U.S. DEPARTMENT OF COMMERCE
Weather Bureau

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WEATHER SUMMARY, 6-MONTHS, APRIL 1967 THROUGH SEPTEMBER 1967

TEMPERATURE: Near to occasionally warmer than seasonal temperatures prevailed the first half of April, but an invasion of Arctic air the 19th cooled them to levels more representative of February. As a result, monthly temperatures averaged well below normal all divisions. Minimums fell to below zero most north central stations the 22nd. Readings of -14 at Fort Assinniboine and Havre were the coldest of the spring-summer season. This was also the coldest April minimum ever observed at Havre. All divisions experienced colder than normal temperatures through May. Only the Western Division warmed to near normal in June. The last general freeze of the season occurred May 13-14, but scattered areas reported freezing minimums as late as June 23-26. July temperatures averaged seasonal to warm in the western two-thirds, but cooler than normal eastern third. Seasonal weather prevailed most areas the first half of August, but the rest of the month, and September, were abnormally warm. The summer's first 100 degree temperatures were recorded July 12 at several West of the Divide stations. The highest for the April-September period was 106 at the Libby Ranger Station August 19. On September 1, maximums climbed to the high 90's West of the Divide and reached 100 at Libby and Trout Creek. Unseasonably warm temperatures for late in the season again prevailed over most of the State September 5. Many maximums reached the high 90's; Fort Assinniboine reported 102 and Havre 101. A general freeze had not occurred by September 30 although a number of stations in the western and northern portions had recorded freezing August 25-26. A few high elevation stations experienced a freezing minimum each month of the season.

PRECIPITATION: April was cloudy and wet with snow general the 5th-6th, heavy snow the 18th-21st, and again the 28th-30th nearly all sections. All divisions received more than normal precipitation except near normal in the Western. April 30 snowpacks in many mountain areas were the greatest of record. Rain fell frequently most areas the first half of May with snow the 1st-3rd and the 10th-11th. The Southwestern, Central, and South Central divisions received more than usual precipitation. More than normal rain fell in June at all stations except those along the western border, in the Northern tier of counties, and the Northeastern Division. Very heavy rains fell in the Central, South Central, and Southeastern divisions June 6-8 with three to nine inches in the central portion. For the month, many stations measured from four to more than twelve inches of rain. July and August precipitation averaged greater than normal in only one division, the Southwestern in July. August precipitation at most stations was .25 inch or less, and about ten percent of all stations had none, making this one of the driest Augusts of record. Dry weather continued until mid-September when general rains brought more than normal amounts to the eastern two-thirds and many stations measured three to four inches. Less than seasonal amounts fell in the western third. For the six-months, precipitation was deficient West of the Divide and in the tier of counties along the Canadian border with totals ranging from less than 40 to about 70 percent of normal. Havre reported the driest summer of record. Only .01 inch of rain fell there in July and a trace in August.

SEVERE STORMS: Two heavy snowstorms East of the Continental Divide April 20-21 and the 29th-30th disrupted all forms of transportation, hindered feeding of livestock, closed ranges, and delayed farm operations. The first storm closed schools along the Canadian border one to three days. During the April 29-30 storm, snow accumulated up to 20 inches in places in the southeast and drifted to depths of 4 to 5 feet. Several schools were closed. In the Butte area, a sixteen year old boy perished while looking for a calf. Cloudy, rainy weather June 6-26 resulted in heavy flooding in some central and south central areas. The heaviest flooding of record occurred on the Musselshell River near Roundup June 6-7. Tributary streams along the Yellowstone River from Livingston to Billings also overflowed, and there was severe flooding of some streams in Carbon County. Flood damage to crops, property, highways, and railroads exceeded four million dollars. The one severe hailstorm of the season, August 6, caused an estimated crop and property loss of nearly \$2,000,000 in northern Glacier, Toole, and Liberty counties. Estimated damage from smaller hailstorms in June and July amounted to around \$500,000. "Dry thunderstorms" set off numerous forest fires in July and August and forest and range fires in September. The first few days of September 150 to 200 lightning fires were set in Phillips, Garfield, Rosebud, and Powder River counties. These fires burned around 28,000 acres of range in Phillips, 10,000 in Garfield, and lesser acreage elsewhere. Lightning strikes injured three people and killed a little league ball player during the summer.

SOIL MOISTURE: Topsoil moisture supplies in early April were rated as adequate on Montana farms and ranches with the exception of a few southeastern counties. Subsoil moisture was short to mostly adequate. Two heavy snowstorms in April improved soil moisture supplies in most areas east of the Continental Divide. Soil moisture remained mostly adequate until July 1. However, an area of shortage developed soon after that time in the northern border counties from Liberty County east to the North Dakota line. Shortages also developed in many localities west of the Divide. Rainfall in July, August, and the first 2 weeks of September was much lower than average. Generous rains fell in most areas east of the Divide around mid-September. It was the end of September before significant rainfall was received west of the Divide.

WINTER WHEAT: At the beginning of April, winter wheat was mostly dormant in the important growing areas of north central and northeastern Montana. However, the crop was greening in favored locations. In late April the crop was in generally good condition, and winterkill was rated light by most weather-crop reporters. The crop matured later than any recent year, and only fifty percent of the acreage was headed by June 14. Harvesting of winter wheat started the last week in July and by September 8 was completed except for a few high elevation and other widely scattered fields. This was only a few days behind normal as harvest progressed rapidly under nearly ideal weather conditions.

FIELD TILLAGE AND SPRING PLANTING: Field tillage work was underway in some southern counties in late March. Farmers in the western and southern parts of the State were generally able to begin or continue field tillage work during the first week of April, but progress in the remaining areas was delayed because of wet, muddy fields. A storm on the 19th-21st of April halted field tillage work. At that time 15 percent of the spring wheat was seeded as compared with 55 percent a year earlier. Several areas had little or no spring grain planted until the latter half of May. During the week of May 15-20, farmers in nearly all areas of the State were able to resume field work. They worked long days in an attempt to get their crops planted as soon as possible after repeated earlier delays because of snow and cold weather. Planting progress of spring grains was about a month behind the previous year's pace. By June 2, ninety-five percent of the spring wheat was in the ground. This was later than any recent year. Planting of potatoes and corn was about 95 percent complete by June 16. Cutting of first crop alfalfa got off to a later than usual start but was virtually completed by the end of July under favorable weather conditions. Thinning of sugar beets was nearly completed by mid-July. Combining of spring wheat, barley and oats also proceeded under favorable weather and was nearing completion by September 15. Nearly ideal harvest weather and the threat of frost spurred the ensiling of corn, and eighty percent of the crop had been harvested by September 29. By the same date, 15 percent of the potato harvest was completed. In 1966, 25 percent of the crop had been dug by this date. Lifting of sugar beets was getting started at the end of September.

LIVESTOCK AND HAY SITUATION: As of April 7, ninety percent of the range livestock was still receiving supplemental feed as compared with about 75 percent one year earlier. Heavy, wet snows in late April caused above normal death losses of calves, lambs and recently shorn sheep. In some areas, ranchers were unable to get to their livestock because of deep drifts. Cold weather retarded growth of grass and prolonged the feeding season. Stocks of hay were low in most areas, and the supply on many ranches was exhausted. Poor road conditions on secondary and county roads restricted the movement of feed. Considerable hay was moving from west of the Divide where weather conditions were not severe. Some hay was also moving in from adjacent States. On May 19, forty percent of the range livestock was still receiving supplemental feed. Nearly 60 percent of the range livestock had been moved to summer ranges by May 26 and movement was complete by June 16. In late August and early September ranges and forests were extremely dry and numerous fires occurred. During this time, most forests in the western third of the State were closed to the general public. By September 29, thirty-five percent of the range cattle and 40 percent of the sheep had been moved to winter ranges or had been marketed. This compares with 45 percent for each a year earlier.

WINTER WHEAT SEEDING: Seeding of winter wheat for harvest next year was about 5 percent completed by September 1. Many farmers delayed fall seeding because of dry soil conditions. Seventy percent of the State's winter wheat acreage was seeded by September 29. This was behind most recent years except 1965. Inadequate soil moisture delayed planting in the western third.

PRECIPITATION: 6-Month Total April - September 1967, and Normal

6-Month Precipitation			6-Month Precipitation		
STATION	April-September		STATION	April-September	
	1967	Normal		1967	Normal
WESTERN DIVISION					
Alberton	8.22		Missoula 2 NE	7.15	
Big Arm	5.01		Missoula WBAS	5.82	7.34
Big Fork 13S	5.31		Olney 1 E	6.13	
Creston	5.76		Ovando 7 WNW	6.85	
Darby	8.61	7.45	Paradise	6.63	
Deer Lodge	7.06		Philipsburg	7.54	9.74
Drummond	9.28	7.62*	Pleasant Valley	4.84	7.99
E. Anaconda	11.75	8.43	Polebridge	2.33	
Elliston	8.41		Polson Kerr Dam	4.75	
Eureka	3.01		St. Ignatius	7.94	9.31
Fortine 1 N	3.41	9.19	St. Regis	5.98	
Hamilton	6.60	6.67	Seeley Lake	6.95	
Haugan	5.66	9.05	Stevensville	5.70	6.57
Heron 2 NW	6.83	10.24	Summit	10.44	
Hungry Horse Dam	7.65		Superior	5.26	7.57
Kalispell WBAS	4.33	8.09	Swan Lake	5.83	
Kalispell	4.71		Thompson Falls	5.14	8.18
Kila	4.47		Trout Creek	5.36	
Libby 1 NE	5.69	6.70	Troy	4.72	
Libby 32 SSE	7.32		West Mont Br. Sta.	6.52	
Lindbergh Lake	6.53		West Glacier	4.69	11.74
Lolo Hot Spgs 2 NE	7.62				
Lonepine 1 WNW	5.20	5.57			
SOUTHWESTERN DIVISION					
Alder 17 S	11.27		Jackson	9.97	
Belgrade FAA AP	9.56	9.23*	Lakeview	12.21	
Boulder St. School	9.28		Norris 3 ENE	11.56	
Bozeman MSU	10.55	10.90	Norris Madison PH	9.75	11.87
Bozeman 6 W	8.87		Trident	8.02	
Bozeman 12 NE	21.28		Twin Bridges	8.34	
Butte FAA AP	10.61	8.33	Virginia City	10.66	9.53
Dillon FAA AP	8.79	6.95*	W. Yellowstone	10.48	9.63
Dillon WMC	10.05	8.12	Whitehall	9.67	7.52*
Divide 2 NW	9.33		Wisdom	8.90	
Ennis	7.21	8.29			
Glen 4 N	10.27				
Hebgen Dam	13.93	11.31			
NORTH CENTRAL DIVISION					
Babb 6 NE	9.30	13.53	Goldbutte 7 N	5.76	
Big Sandy	7.75	9.24	Harlem	6.31	8.95
Blackleaf	8.68		Havre WBAS	5.34	8.61
Brady	8.44		Iliad	8.24	
Browning	12.18	10.17	Joplin 1 N	5.68	
Chester	5.22		Loma 1 WNW	10.17	
Chester 26 NNW	9.55		Loring 10 N	5.21	
Choteau	10.57	9.34	Malta	5.09	8.84
Cleveland 5 ENE	10.81		Phillips 1 S	7.20	
Conrad	7.30	9.49	Rudyard 30 N	5.95	
Content	7.67		Saco 1 NNW	4.40	
Cut Bank FAA AP	6.04	9.12	Santa Rita 14 N	10.78	
Del Bonita	8.76		Shelby AP	6.29	
Dunkirk 14 NNE	5.96	8.88	Simpson	4.10	8.16
Fairfield	9.48	9.32	Telegraph Creek	6.80	8.51
Forks NNE	6.42		Tiber Dam	6.02	
Ft. Assinniboine	5.26	8.56	Turner	6.03	
Ft. Benton	10.67	10.01*	Valier	8.32	10.26
Geraldine	11.59		Zortman	14.79	
Gilford	5.77				
CENTRAL DIVISION					
Augusta	12.83	10.07	Lewistown FAA AP	13.36	12.02
Austin 1 W	7.29		Lincoln RS	7.31	
Barber	13.11		Martinsdale 3 NNW	10.46	10.14*
Canyon Ferry PH	8.63		Melstone	11.68	8.60
Cascade 5 S	11.39	10.45	Moccasin Exp. Sta.	13.81	10.64
Cascade 20 SSE	14.22		Raynesford	13.15	
Denton	10.30		Rogers Pass 6 NNE	12.69	
Flatwillow 4 ENE	12.19	9.53	Roundup	12.26	8.22
Gibson Dam	15.66	12.01	Roy 8 NE	10.33	
Grass Range	15.59		Roy 24 NE	9.61	
Grass Range 12 NE	9.05		Ryegate 18 NNW	12.72	
Great Falls WBAS	12.24	9.72	Stanford 1 WNW	13.08	11.19
Harlowton	12.63		Sun River 5 SW	12.04	

*Estimated Normal

PRECIPITATION: 6-Month Total, April-September 1967, and Normal

6-Month Precipitation			6-Month Precipitation		
STATION	April-September		STATION	April-September	
	1967	Normal		1967	Normal
CENTRAL DIVISION (cont.)					
Helena WBAS	8.54	7.49	Toston 3 SW	9.19	
Holter Dam	8.24	9.07	Townsend	10.18	
Judith Gap 13 E	17.12		Utica 11 WSW	11.26	
Lennep 5 SW	9.32		White Sul. Spgs.	9.43	11.19
SOUTH CENTRAL DIVISION					
Ballantine	12.60	7.99	Hysham	8.06	
Belfry	6.51		Joliet	9.73	
Big Timber	13.11	10.06	Kirby 1 S	14.12	
Billings WP	10.54	9.43	Livingston	10.14	9.09
Billings WBAS	10.22	8.73	Livingston FAA AP	12.89	10.23*
Bridger	7.40		Melville 4 W	17.16	
Busby	13.51	8.81	Mystic Lake	17.71	15.25
Columbus	14.13	9.51	Rapelje 4 S	13.05	9.25
Crow Agency	10.43	9.32	Red Lodge	16.79	13.39
Custer	8.33		Wilsall 8 ENE	12.71	
Gardiner	7.30		Wyola	14.08	9.04*
Hardin	8.87		Yellowtail Dam	14.85	
Huntley Exp. Sta.	11.84	7.96			
NORTHEASTERN DIVISION					
Bloomfield 6 E	11.66		Medicine Lake 3 SE	8.29	10.35
Bredette	8.60		Mosby 2 ENE	11.63	
Brockway	7.47		Mosby 18 N	10.20	
Circle	9.56	9.28*	Nohly 3 WNW	10.21	
Culbertson	9.67	10.26	Opheim 10 N	5.59	
Fort Peck PP	6.53		Opheim 12 SSE	5.12	
Glasgow WBAS	6.25	9.26	Raymond Border St.	6.68	
Glendive	11.11	9.91	Redstone	6.73	
Haxby 18 SW	9.74	9.79	Richey	8.95	
Hinsdale	6.49		Scobey	6.91	
Hinsdale 23 N	4.82		Sidney	10.46	10.72*
Jordan	11.25	7.81	Vida	12.69	10.81
Jordan 22 E	10.59		Westby	4.87	
Lambert 3 ESE	11.34		Wolf Point 4 ESE	8.74	
Lustre 4 NNW	7.27	9.45			
SOUTHEASTERN DIVISION					
Albion 1 N	13.56		Miles City FAA AP	12.34	9.04
Birney 2 SE	10.48		Mizpah 4 NNW	12.59	
Boyes	11.64		Moorhead 9 NE	11.37	
Brandenberg	12.78		Otter 9 SSW	15.20	
Broadus	14.79	10.10*	Plevna	13.21	9.70
Carlyle 12 NW	12.75		Powderville 8 NNE	16.70	
Colstrip	12.28	10.48	Ridgway 1 S	13.01	
Ekalaka	21.24	10.32	Rock Springs	10.39	
Forsyth 2 E	10.13		Sonnette 2 WNW	13.77	
Ingomar 11 NE	11.24		Terry	10.30	
Lame Deer	12.07		Terry 21 NNW	11.52	
Mildred	13.02	9.56	Wibaux 2 E	11.09	
Miles City	13.71				

*Estimated Normal

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